Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application.

CLAIMS

1. (Currently Amended) A transmission joint for transmitting drive between a first shaft and a second shaft ~~(2, 3)~~, comprising a first joint element and a second joint element ~~(4, 5)~~ which can be mutually coupled for the transmission of the drive between the shafts, each joint element ~~(4, 5)~~ being rotatable about a respective first or second axis of rotation ~~(X1, X2)~~, the first joint element ~~(4) comprising~~ including an approximately spheroidal body ~~(6)~~ formed by a plurality of adjacent segment-like portions ~~(6a)~~ having curved external profile surfaces and defining, transverse the first axis ~~(X1)~~, cross-sections of the body with polygonal outlines, the spheroidal body ~~(6)~~ being able to engage a blind axial cavity ~~(10)~~ of the second joint element ~~(5)~~ having a cross-section, transverse the second axis ~~(X2)~~, with a polygonal outline corresponding to the profile of the body ~~(6)~~ and of dimensions such that the first joint element ~~(4)~~ is housed in the second joint element ~~(5)~~ with mutual torsional coupling and a capability for relative inclination of the axes of the joint elements for the transmission of drive between the ~~said~~ shafts ~~(2, 3)~~ with non-aligned axes, the transmission joint further ~~comprising~~including, on the joint elements ~~(4, 5)~~, means for limiting the relative angular inclination of the axes ~~(X1, X2)~~ of rotation of the joint elements, ~~in order consequently~~ to permit the correct transmission of drive between inclined shafts ~~(2, 3)~~, up to a preselected maximum angular inclination ~~(A)~~, ~~characterized in that~~ the first and second joint elements ~~(4, 5) comprise~~include a first portion and a second portion ~~(9, 11)~~ which are shaped as spherical sectors ~~(9a, 11a)~~ forming parts of a common spherical profile of preselected radius, a shell element ~~(14)~~ with a spherical internal surface being provided for containing the spherical-sector-shaped portions ~~(9a, 11a)~~ and restraining them with relative coupling of ~~the~~ a ball-and-socket type, with a common centre of rotation between the shell ~~(14)~~ and the spherical sectors ~~(9a, 11a)~~.

2. (Currently Amended) A joint according to Claim 1 in which the limiting means comprise at least a first surface and a second surface ~~(12, 13)~~ defined on the first and second joint elements ~~(4, 5)~~, respectively, the first and second surfaces ~~(12, 13)~~ being capable of contacting and bearing against one another at the preselected maximum inclination ~~(A)~~ between the axes ~~(X1, X2)~~of the joint elements ~~(4, 5)~~.

3. (Currently Amended) A joint according to Claim 1 ~~or Claim 2~~ in which the first and second surfaces ~~(12, 13)~~ are selected with profiles such that, at the maximum inclination ~~(A)~~ between the shafts, they are in mutual contact, tangentially relative to one another, during the transmission of drive between the elements of the joint ~~(4, 5)~~.

4. (Currently Amended) A joint according to Claim 3 in which one ~~(12)~~ of the surfaces has a flat configuration extending transverse the axis of rotation of the corresponding joint element ~~(4)~~ and the other ~~(13)~~ of the surfaces has a tapered configuration with generatrices that are inclined to a plane perpendicular to the axis of rotation of the corresponding joint element ~~(5)~~ at an angle equal to the selected maximum inclination ~~(A)~~ between the axes of the joint.

5. (Currently Amended) A joint according to ~~any one of~~ Claims 2 ~~to 4~~ in which the first and second surfaces ~~(12, 13)~~ are of substantially annular extent and are arranged in positions facing one another for mutual superimposition at the preselected maximum inclination ~~(A)~~ between the first and second axes ~~(X1, X2)~~ of the joint elements ~~(4, 5)~~.

6. (Currently Amended) A joint according to Claim 1~~one or more of the preceding claims~~ in which the shell element~~(14)~~ is made in at least two parts ~~(14a, 14b)~~ of predominantly hemispherical shape.

7. (Currently Amended) A joint according to ~~any one of~~ Claims 2 ~~to 6~~ in which the body ~~(6)~~ extends coaxially as an extension of the first portion ~~(9)~~ and the first surface ~~(12) constitutes~~ is a shoulder between the first spherical-sector-shaped portion ~~(9)~~ and the body ~~(6)~~.

8. (Currently Amended) A joint according to Claim 7 in which the first shoulder surface ~~(12) constitutes~~ is at least partially a base of ~~the~~ a spherical-sector-shaped portion ~~(9a)~~ forming the first portion ~~(9)~~.

9. (Currently Amended) A joint according to ~~one or more of the c~~Claims 1 ~~to 5~~ in which the body ~~(6)~~ and the corresponding spherical-sector-shaped portion ~~(9a, 9)~~ of the first joint element ~~(4)~~ are produced as a unitary part.

10. (Currently Amended) A joint according to Claim 2~~one or more of the claims 1 to 5~~ in which the blind axial cavity ~~(10)~~ is formed coaxially in the second portion ~~(11)~~ of the corresponding joint element ~~(5)~~, the second surface ~~(13)~~ extending around the cavity ~~(10)~~ so as to adjoin the spherical region of the second portion ~~(11)~~.

11. (Currently Amended) A joint according to Claim 10 in which the blend axial cavity ~~(10)~~ and the corresponding spherical-sector-shaped portion ~~(11a, 11)~~ of the second joint element ~~(5)~~ are produced as a unitary part.

12. (Currently Amended) A joint according to ~~one or more f the c~~Claims ~~1 to 5~~ in which the shell ~~(14)~~ has openings ~~(17)~~ in the region of the axes of rotation ~~(X1, X2)~~ of the joint elements ~~(4, 5)~~ for the insertion of respective axial ends ~~(18, 19)~~ of the joint elements ~~(4, 5)~~ which are arranged for connection to the corresponding drive-transmission shafts ~~(2, 3)~~, the openings ~~(17)~~ being of an extent such as to permit relative inclination between the joint elements ~~(4, 5)~~, up to the preselected maximum inclination ~~(A)~~.

13. (New) A joint according to Claim 2 in which the first and second surfaces are selected with profiles such that, at the maximum inclination between the shafts, they are in mutual contact, tangentially relative to one another, during the transmission of drive between the elements of the joint.

14. (New) A joint according to Claim 3 in which the first and second surfaces are of substantially annular extent and are arranged in positions facing one another for mutual superimposition at the preselected maximum inclination between the first and second axes of the joint elements.

15. (New) A joint according to Claim 4 in which the first and second surfaces are of substantially annular extent and are arranged in positions facing one another for mutual superimposition at the preselected maximum inclination between the first and second axes of the joint elements.

16. (New) A joint according to Claim 2 in which the shell element is made in at least two parts of predominantly hemispherical shape.

17. (New) A joint according to Claim 3 in which the shell element is made in at least two parts of predominantly hemispherical shape.

18. (New) A joint according to Claim 4 in which the shell element is made in at least two parts of predominantly hemispherical shape.

19. (New) A joint according to Claim 5 in which the shell element is made in at least two parts of predominantly hemispherical shape.

20. (New) A joint according to Claim 3 in which the body extends coaxially as an extension of the first portion and the first surface is a shoulder between the first spherical-sector-shaped portion and the body.

21. (New) A joint according to Claim 4 in which the body extends coaxially as an extension of the first portion and the first surface is a shoulder between the first spherical-sector-shaped portion and the body.

22. (New) A joint according to Claim 5 in which the body extends coaxially as an extension of the first portion and the first surface is a shoulder between the first spherical-sector-shaped portion and the body.

23. (New) A joint according to Claim 6 in which the body extends coaxially as an extension of the first portion and the first surface is a shoulder between the first spherical-sector-shaped portion and the body.

24. (New) A joint according to Claim 2 in which the body and the corresponding spherical-sector-shaped portion of the first joint element are produced as a unitary part.

25. (New) A joint according to Claim 3 in which the body and the corresponding spherical-sector-shaped portion of the first joint element are produced as a unitary part.

26. (New) A joint according to Claim 4 in which the body and the corresponding spherical-sector-shaped portion of the first joint element are produced as a unitary part.

27. (New) A joint according to Claim 5 in which the body and the corresponding spherical-sector-shaped portion of the first joint element are produced as a unitary part.

28. (New) A joint according to Claim 3 in which the blind axial cavity is formed coaxially in the second portion of the corresponding joint element, the second surface extending around the cavity so as to adjoin the spherical region of the second portion.

29. (New) A joint according to Claim 4 in which the blind axial cavity is formed coaxially in the second portion of the corresponding joint element, the second surface extending around the cavity so as to adjoin the spherical region of the second portion.

30. (New) A joint according to Claim 5 in which the blind axial cavity is formed coaxially in the second portion of the corresponding joint element, the second surface extending around the cavity so as to adjoin the spherical region of the second portion.

31. (New) A joint according to Claim 2 in which the shell has openings in the region of the axes of rotation of the joint elements for the insertion of respective axial ends of the joint elements which are arranged for connection to the corresponding drive-transmission shafts, the openings being of an extent such as to permit relative inclination between the joint elements, up to the preselected maximum inclination.

32. (New) A joint according to Claim 3 in which the shell has openings in the region of the axes of rotation of the joint elements for the insertion of respective axial ends of the joint elements which are arranged for connection to the corresponding drive-transmission shafts, the openings being of an extent such as to permit relative inclination between the joint elements, up to the preselected maximum inclination.

33. (New) A joint according to Claim 4 in which the shell has openings in the region of the axes of rotation of the joint elements for the insertion of respective axial ends of the joint elements which are arranged for connection to the corresponding drive-transmission shafts, the openings being of an extent such as to permit relative inclination between the joint elements, up to the preselected maximum inclination.

34. (New) A joint according to Claim 5 in which the shell has openings in the region of the axes of rotation of the joint elements for the insertion of respective axial ends of the joint elements which are arranged for connection to the corresponding drive-transmission shafts, the openings being of an extent such as to permit relative inclination between the joint elements, up to the preselected maximum inclination.